WINZLER & KELLY
CONSULTING ENGINEERS

Ref: 02343-05001-32003

January 31, 2006

Dr. Richard Mani
8 Pelican Point Road
Belvedere, CA 94920

Re: Quarterly Groundwater Monitoring Report – Third Quarter 2005 and Semi-Annual Biosparge System Update, Mani Site, 200 Talmadge Drive, Santa Rosa, California, NCRWQCB Case No. 1TSR279

Dear Dr. Mani:

This report presents Winzler & Kelly Consulting Engineers' (Winzler & Kelly's) results of the biosparge system operation and the groundwater monitoring and sampling performed on September 28 and 29, 2005, for the site located at 200 Talmadge Drive, Santa Rosa, California (Figures 1 and 2).

THIRD QUARTER GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

The Site-Specific Sampling Procedures, provided in Appendix A, describe in detail all of the monitoring and sampling activities that were performed at the site on September 28 and 29, 2005. A brief summary of these activities is also provided below.

FIELD ACTIVITIES

Personnel Present: Winzler & Kelly's technicians, Pon Xayasaeng and Trevor White performed all the groundwater monitoring and sampling activities.

Dissolved Oxygen: On September 28, 2005, dissolved oxygen (DO) concentrations were measured in each monitoring well at the site. The measurements were obtained using a calibrated DO meter while the biosparge system was operating.

Biosparge Shutdown: On September 28, 2005, the biosparge system was shutdown after DO measurements had been obtained to allow groundwater levels to equilibrate.

Depth-to-Water: On September 28, 2005, the depth-to-groundwater (DTW) was measured in each monitoring well while the biosparge system was operating. DTW was measured again on September 29, 2005, while the biosparge system was turned off and groundwater levels had equilibrated to atmospheric pressure for at least 30 minutes. The measurements were obtained using an electronic water level meter.

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▼

Purging: On September 29, 2005, an electronic 12-volt 1.5-inch submersible pump was used to purge each monitoring well at the site. A copy of each well sampling data sheet is provided in Appendix B.

Groundwater Sampling: On September 29, 2005, groundwater samples were collected from each monitoring well at the site. New disposable bailers were used to collect and transfer the groundwater samples from each monitoring well into the appropriate, laboratory-supplied, certified clean sample containers.

Chemical Analysis: Analytical Sciences Laboratory (Analytical Sciences) of Petaluma, California (a California-certified laboratory) analyzed the groundwater samples for TPH-G and total petroleum hydrocarbons as diesel (TPH-D) by EPA Test Method 8015M, for benzene, toluene, ethyl benzene, and total xylenes (BTEX) and oxygenated fuel additives by EPA Test Method 8260B, for Nitrite as Nitrogen, Nitrate as Nitrogen, and Phosphate by EPA Test Method 300, and for Ammonia as Nitrogen by EPA Test Method 350.3.

GROUNDWATER MONITORING AND SAMPLING RESULTS

The groundwater elevation data and groundwater flow direction are presented in Tables 1 and 2. A groundwater contour map illustrating the groundwater elevation contours at the site on September 29, 2005, is provided as Figure 3. As shown on Figure 3, the groundwater at the site was flowing towards the southwest at a gradient of 0.01 ft/ft.

The DO concentrations measured on September 28, 2005, indicate that the biosparge system is effectively introducing oxygen into the aquifer downgradient of the former underground storage tanks (USTs). The DO results are summarized in Table 3. The only exceptions to this are monitoring wells MW-4 and MW-5, where DO concentrations are low during this sampling event. However, TPH-G and methyl tert-butyl ether (MTBE) concentrations have significantly decreased.

Nutrient monitoring has been conducted on a quarterly basis since the first nutrient injection performed on September 22, 2004. During the first nutrient injection, 9 pounds (lbs) of Nitrate as Nitrogen was injected into biosparge points SP-3, SP-4, and SP-5. The purpose of the nutrient injections is to increase intrinsic aerobic biodegradation, which then decreases the cleanup time. Nutrient monitoring is completed to observing changes in nutrient concentrations and biodegradation activity. Due to low concentrations of nutrients observed during the June 13, 2005 sampling event, the second nutrient injection was performed, on July 21, 2005. Approximately 15 lbs of Nitrate as Nitrogen was injected into biosparge points SP-2, SP-3, SP-4, and SP-5. On August 12, 2005, concentrations of Nitrate and Nitrite as Nitrogen were monitored in each well using a field test strip kit. Nitrate as Nitrogen concentrations were low and ranged from 0.0 to 2.0 mg/L. Nitrite as Nitrogen concentrations were 0.0 mg/L for all the monitoring wells.

Analytical results of nutrients from the September 29, 2005 groundwater samples also indicated low concentrations of Nitrate as Nitrogen in the monitoring wells at the site. Nitrite as Nitrogen, Ammonia as Nitrogen, and Phosphate were not detected in any of the groundwater samples. The results are summarized in Table 4.

The low concentrations of nutrients indicate that additional nutrient injections are needed in order to speed up the remediation. Winzler & Kelly will conduct the third nutrient injection in December 2005 in biosparge points SP-2 through SP-5. Following the nutrient injection, Nitrate as Nitrogen, Nitrite as Nitrogen, Ammonia as Nitrogen, and Phosphate will be analyzed during the fourth quarter 2005 monitoring and sampling event to ensure concentrations are below and maintain to be below the maximum contaminant levels for nutrients.

Consistent with historical analytical results, petroleum related constituents were quantified above the laboratory's reportable detection limits (RDLs) in groundwater samples collected from MW-1 and MW-5 on September 29, 2005. During this sampling event, the TPH-G concentration of 200 µg/L in MW-5 is similar to previous sampling events. MW-5 is located on the outer limits of the biosparge points radius of influence; therefore, aerobic biodegradation is slower near MW-5 than monitoring wells that are within the biosparge points radius of influence. The TPH-G concentration of 280 µg/L in MW-1 (located within the biosparge points radius of influence) has significantly decreased since the previous sampling event and is the lowest concentration in this well to date. In addition, the TPH-G concentration in MW-4 has reduced to the Regional Water Board's Water Quality Objectives. Reduction of TPH-G concentrations in monitoring wells MW-1 and MW-4 (within the biosparge points radius of influence) indicate that aerobic biodegradation has considerably increased with the increase of air flow to the aquifer combined with the injection of nutrients.

Laboratory analysis of the groundwater samples collected on September 29, 2005, from monitoring wells MW-2 and MW-6 did not quantify any petroleum related hydrocarbons above the laboratory's RDLs, except for low concentrations of total xylenes at 1.2 µg/L in MW-2. Monitoring wells MW-2 and MW-6 are located upgradient and crossgradient of the former USTs, respectively. The level of total xylenes in MW-2 are inconsistent and detected only twice; therefore does not appear to be a concern, but monitoring will continue. The analytical results are summarized in Table 5. A summary of the analytical results of TPH-G, benzene, and MTBE on September 29, 2005, is also provided on Figure 4.

The laboratory QA/QC included the use of method blanks to exclude false-positive analyses and the use of laboratory control samples to evaluate the percentage recovery of known analyte spikes. The recovery percentages for all of the sample analytes were within acceptable ranges. Contaminants of concern were not detected in the analysis of the trip blank. The complete laboratory report, QA/QC data, and the chain-of-custody form are included in Appendix C.

BIOSPARGE SYSTEM OPERATION

A brief summary of the biosparge system operation and maintenance activities is provided below.

- On March 1, 2005, the air flow rate was increased to 6.0 SCFM due to continual low DO concentrations.

- On July 21, 2005, the biosparge system was shutdown to replace the old compressor (2-CIL-1) with a new compressor (3-CIL-1) to meet the increased demand of air flow rate (6.0 SCFM). In addition, the second nutrient injection was completed at the same time.

The new compressor is able to maintain the air flow rate demand of 6.0 SCFM needed to increase aerobic biodegradation at the site, while the old compressor could not. With the air flow rate set at 6.0 SCFM, the biosparge points radius of influence has increased. Operation and maintenance data is presented on Table 6. Analytical results from the past three sampling events show concentrations of total petroleum hydrocarbons as gasoline (TPH-G) significantly decreasing in monitoring wells MW-1 and MW-4, which are within the biosparge points radius of influence.

GeoTracker Data Entry

As required by Assembly Bill AB2886, Winzler & Kelly has submitted the well measurement file for the September 29, 2005 groundwater sampling event to the GeoTracker database. Copies of the submittal verifications are included in Appendix D. Winzler & Kelly will submit the analytical data and this report to the GeoTracker database upon receipt of the EDF report from Analytical Sciences and upon completion of this report.

Recommendations

Winzler & Kelly will continue to perform quarterly groundwater monitoring, nutrient injection, and sampling activities at the site. The fourth quarter 2005 monitoring and sampling event was conducted in December 2005 and the fourth quarter 2005 monitoring report will be submitted following this report. The first quarter 2006 monitoring and sampling event is scheduled for March 2006.

Should you have any questions or comments regarding this project, please contact Ms. Elizabeth Cargay, Project Manager, at (707) 523-1010.

Sincerely,
WINZLER & KELLY

Pon Xayasaeng
Environmental Engineer

Kent O'Brien, PG, CEG
Senior Project Geologist

PROFESSIONAL GEOLOGIST
KENT O'BRIEN
No. 2132
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

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Attachments

Attachments

Figures:

- Figure 1 – Vicinity Map
- Figure 2 – Site Map
- Figure 3 – Groundwater Contour Map
- Figure 4 – Petroleum Hydrocarbon Concentrations in Groundwater

Tables:

- Table 1 – Water Level Data and Well Construction Details
- Table 2 – Groundwater Gradient and Flow Direction
- Table 3 – Dissolved Oxygen and Indicator Parameters
- Table 4 – Analytical Results of Nutrient Compounds
- Table 5 – Analytical Results of Groundwater Samples
- Table 6 – Operation and Maintenance Data

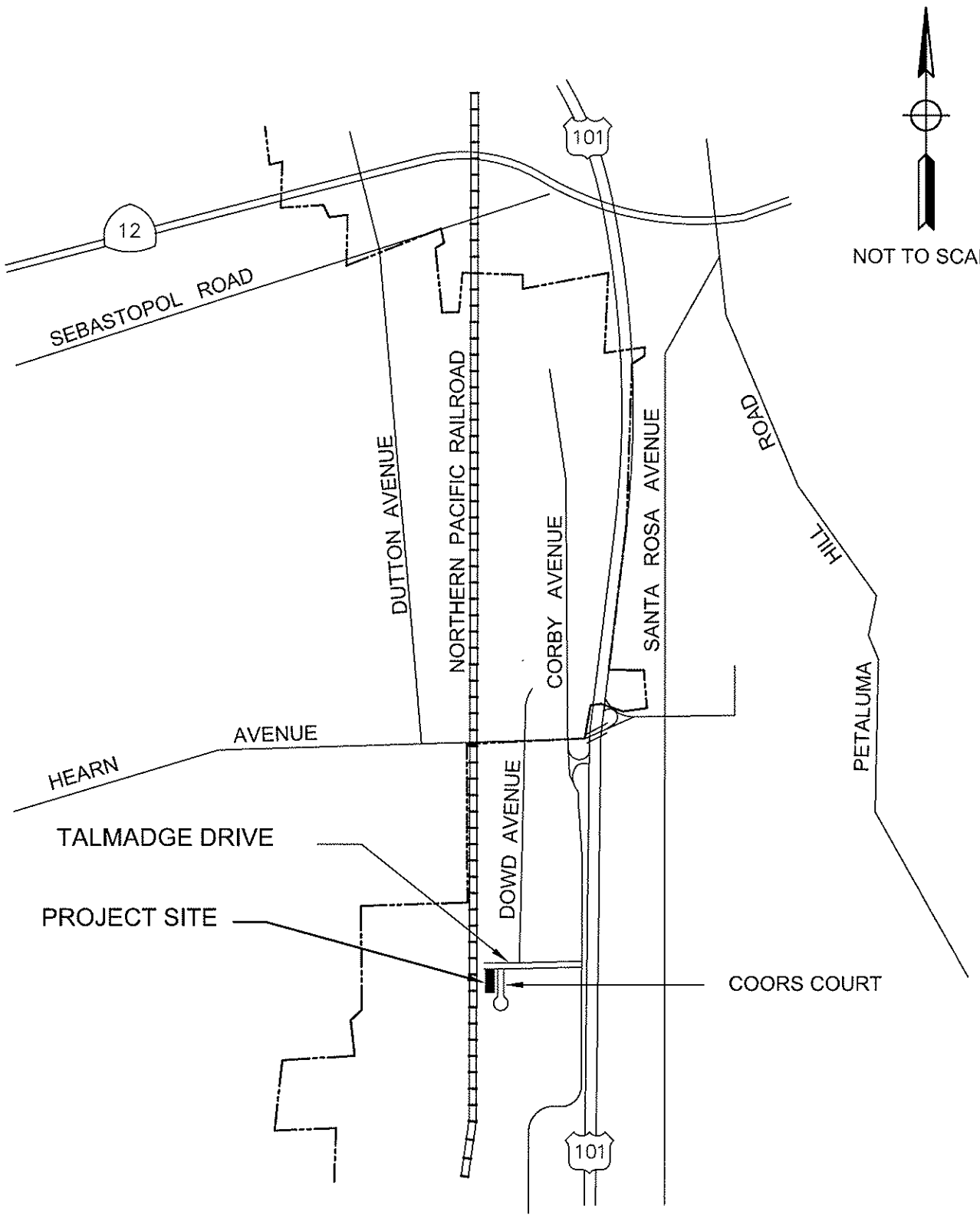
Appendices:

- Appendix A – Site-Specific Sampling Procedures
- Appendix B – Well Sampling Data Sheets
- Appendix C – Analytical Laboratory Report
- Appendix D – GeoTracker Upload Verification

c: Mr. Jim Tischler, North Coast Regional Water Quality Control Board, 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403

Mr. Don Wehr, 1839 Bella Vista Avenue, Santa Rosa, CA 95403

Figures



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VICINITY MAP
MANI SITE
200 TALMADGE DRIVE
SANTA ROSA, CA
FIGURE 1

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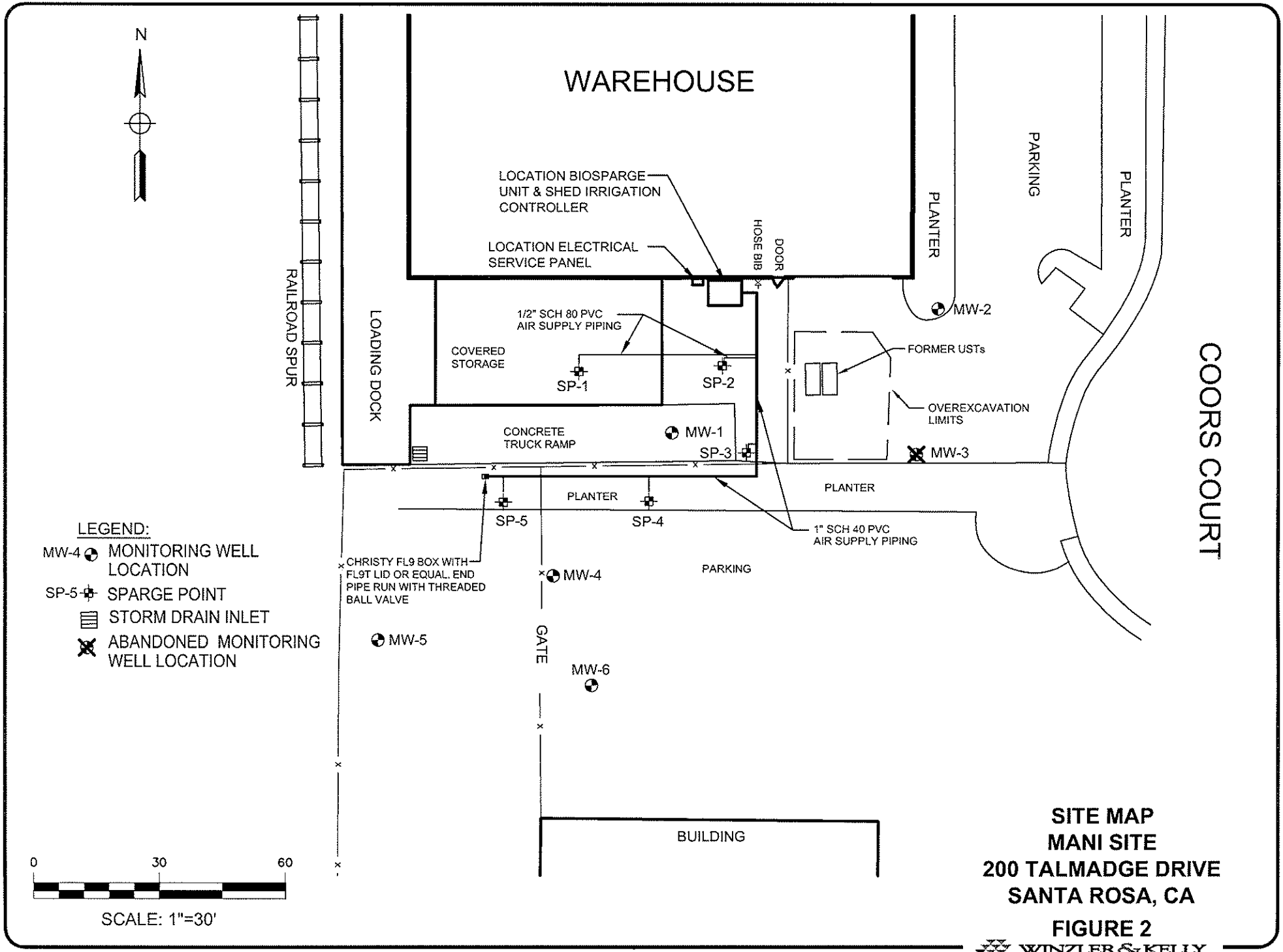

SITE MAP
MANI SITE
200 TALMADGE DRIVE
SANTA ROSA, CA

FIGURE 2

WINZLER & KELLY
CONSULTING ENGINEERS

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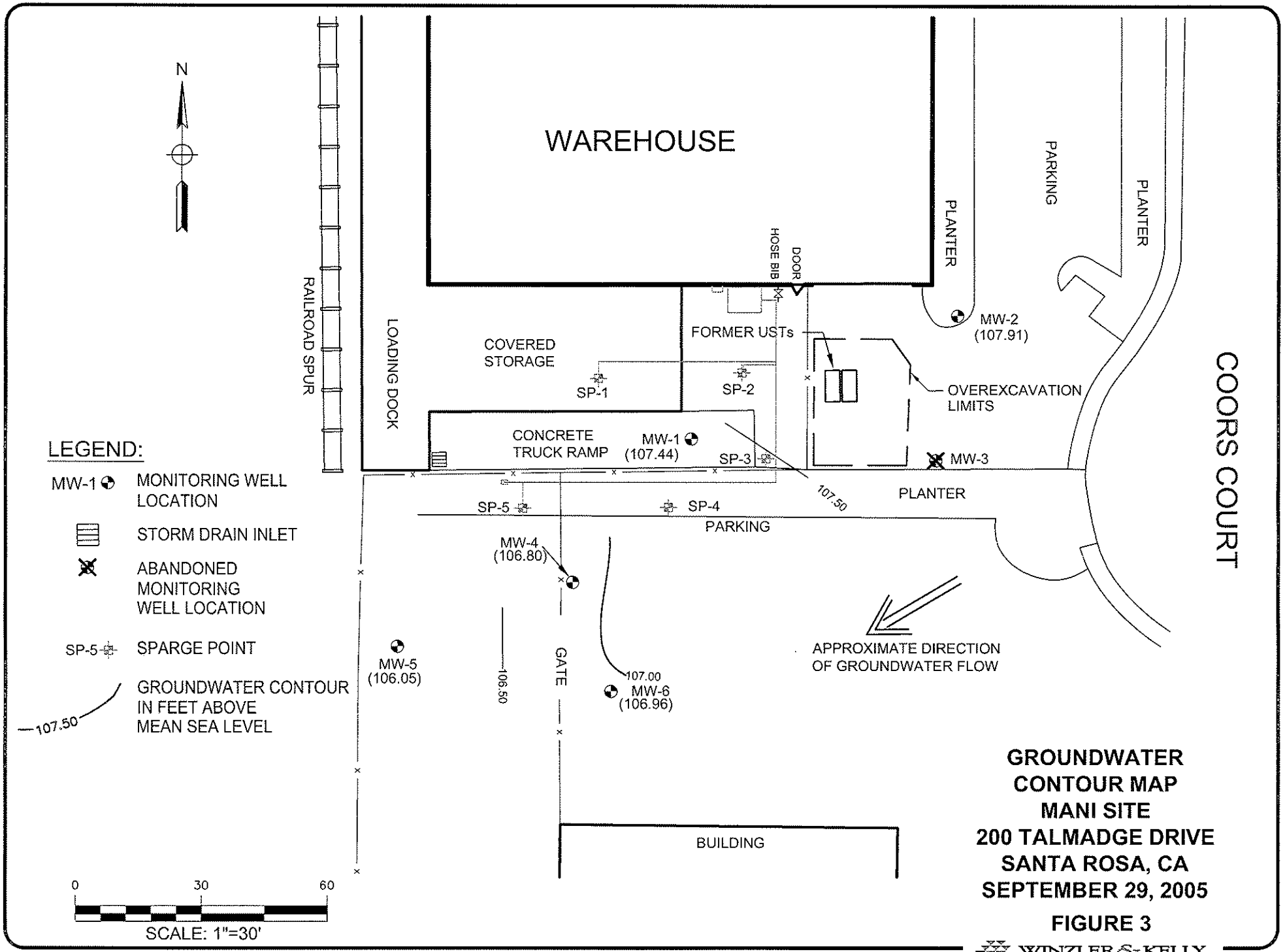

GROUNDWATER CONTOUR MAP
MANI SITE
200 TALMADGE DRIVE
SANTA ROSA, CA
SEPTEMBER 29, 2005

FIGURE 3

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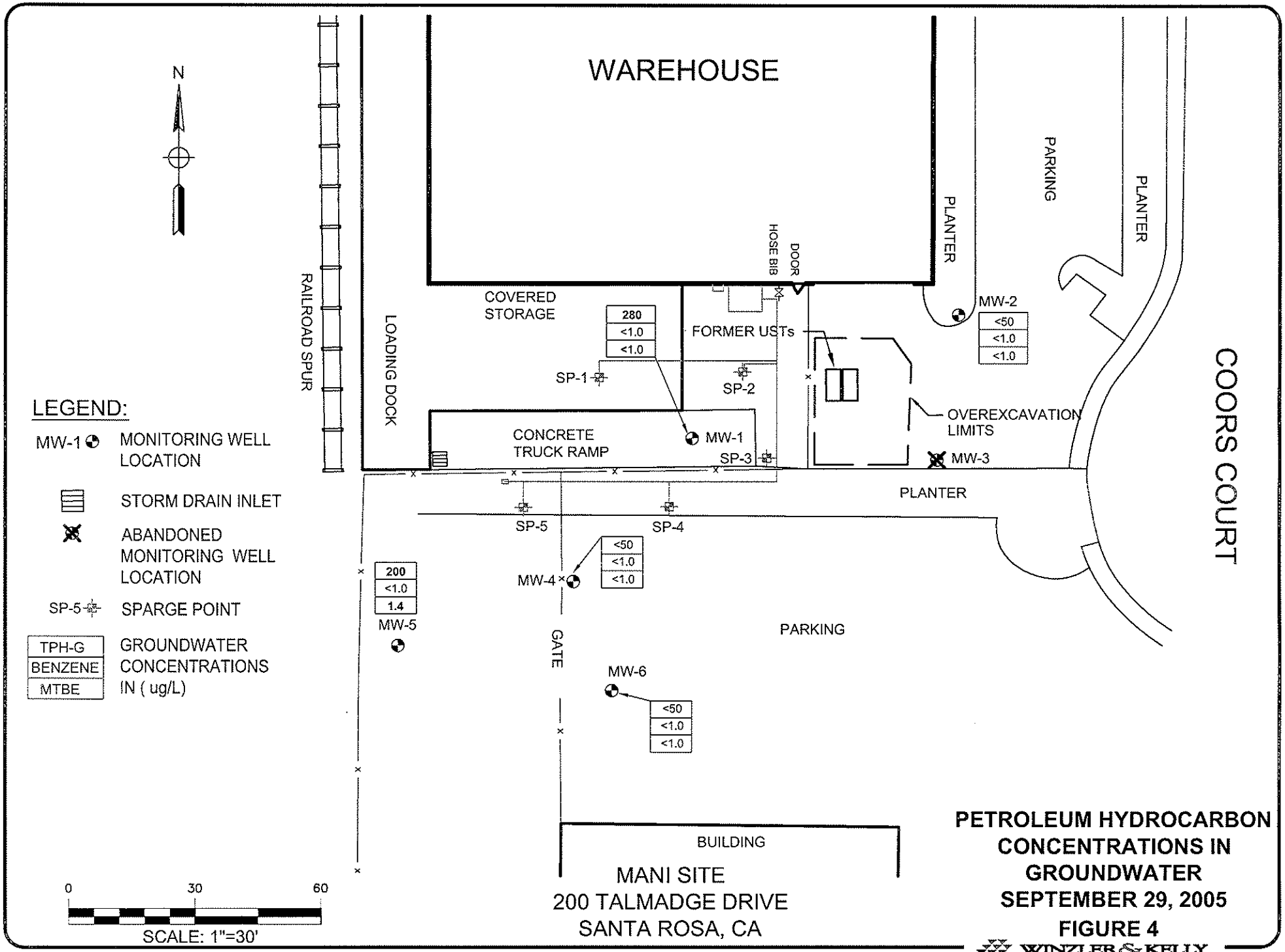

MANI SITE
200 TALMADGE DRIVE
SANTA ROSA, CA

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUNDWATER SEPTEMBER 29, 2005

FIGURE 4

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Tables

Table 1. Water Level Data and Well Construction Details

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date	Groundwater Elevation (Mean Sea Level)		Depth-to-Water		Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval
		System On	System Off	System On	System Off		feet			
MW-1	2/2/1995	NM	110.41	NM	8.25	118.66	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998	NM	111.51	NM	7.15		-			
	9/9/1999	NM	106.31	NM	12.35		-			
	10/11/1999	NM	105.65	NM	13.01		-			
	11/17/1999	NM	105.24	NM	13.42		0.00			
	12/15/1999	NM	105.08	NM	13.58		0.00			
	1/12/2000	NM	104.77	NM	13.89		0.00			
	2/10/2000	NM	106.70	NM	11.96		0.00			
	3/15/2000	NM	111.09	NM	7.57		0.00			
	4/13/2000	NM	109.87	NM	8.79		0.00			
	5/12/2000	NM	109.41	NM	9.25		0.00			
	6/15/2000	NM	108.39	NM	10.27		0.00			
	7/14/2000	NM	107.24	NM	11.42		0.00			
	3/6/2001	NM	108.06	NM	10.63	118.69	0.00			
	6/6/2001	NM	106.70	NM	11.99		0.00			
	9/12/2001	NM	104.58	NM	14.11		0.00			
	12/13/2001	NM	106.28	NM	12.41		0.00			
	3/21/2002	NM	110.54	NM	8.15		0.00			
	6/14/2002	NM	108.09	NM	10.60		NM			
	9/10/2002	NM	105.69	NM	13.00		NM			
	12/11/2002	NM	104.81	NM	13.88		NM			
	3/25/2003	NM	109.76	NM	8.93		NM			
	6/27/2003	NM	109.07	NM	9.62		NM			
	10/1/2003	NM	106.05	NM	12.64		NM			
	12/12/2003	NM	106.24	NM	12.45		NM			
	3/26/2004	NM	110.34	NM	8.35		NM			
	7/9/2004	NM	107.43	NM	11.26		NM			
	9/21/2004	NM	105.63	NM	13.06		NM			
	12/20/04 & 12/21/04	106.15	106.09	12.54	12.60		NM			
	3/16/05 & 3/17/05	110.60	110.58	8.09	8.11		NM			
	6/9/05 & 6/13/05	110.69	110.54	8.00	8.15		NM			
	9/28/05 & 9/29/05	106.88	107.44	11.81	11.25		NM			
MW-2	2/2/1995	NM	111.08	NM	9.27	120.35	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998	NM	112.08	NM	8.27		-			
	9/9/1999	NM	106.72	NM	13.63		-			
	10/11/1999	NM	106.04	NM	14.31		-			
	11/17/1999	NM	105.59	NM	14.76		0.00			
	12/15/1999	NM	105.37	NM	14.98		0.00			
	1/12/2000	NM	105.04	NM	15.31		0.00			
	2/10/2000	NM	107.00	NM	13.35		0.00			
	3/15/2000	NM	111.39	NM	8.96		0.00			
	4/13/2000	NM	110.24	NM	10.11		0.00			
	5/12/2000	NM	109.80	NM	10.55		0.00			
	6/15/2000	NM	108.78	NM	11.57		0.00			
	7/14/2000	NM	107.64	NM	12.71		0.00			
	3/6/2001	NM	108.33	NM	12.04	120.37	0.00			
	6/6/2001	NM	107.05	NM	13.32		0.00			
	9/12/2001	NM	104.89	NM	15.48		0.00			
	12/13/2001	NM	106.54	NM	13.83		0.00			
	3/21/2002	NM	110.80	NM	9.57		0.00			
	6/14/2002	NM	108.45	NM	11.92		NM			
	9/10/2002	NM	106.07	NM	14.30		NM			
	12/11/2002	NM	105.11	NM	15.26		NM			
	3/25/2003	NM	110.10	NM	10.27		NM			
	6/27/2003	NM	109.55	NM	10.82		NM			
	10/1/2003	NM	106.47	NM	13.90		NM			
	12/12/2003	NM	106.62	NM	13.75		NM			
	3/26/2004	NM	110.68	NM	9.69		NM			
	7/9/2004	NM	107.89	NM	12.48		NM			
	9/21/2004	NM	106.04	NM	14.33		NM			
	12/20/04 & 12/21/04	106.49	106.40	13.88	13.97		NM			
	3/16/05 & 3/17/05	110.92	110.89	9.45	9.48		NM			
	6/9/05 & 6/13/05	111.07	110.98	9.30	9.39		NM			
	9/28/05 & 9/29/05	107.97	107.91	12.40	12.46		NM			

Table 1. Water Level Data and Well Construction Details

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date	Groundwater Elevation (Mean Sea Level)		Depth-to-Water		Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval
		System On	System Off	System On	System Off		feet			
MW-3	2/2/1995		110.52		9.47	119.99	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998		111.41		8.58		-			
	9/9/1999		106.57		13.42		-			
	10/11/1999		105.89		14.10		-			
	11/17/1999		105.46		14.53		0.00			
	12/15/1999		105.25		14.74		0.00			
	1/12/2000		104.95		15.04		0.00			
	2/10/2000		106.88		13.11		0.00			
	3/15/2000		111.30		8.69		0.00			
	4/13/2000		110.12		9.87		0.00			
	5/12/2000		109.66		10.33		0.00			
	6/15/2000		108.64		11.35		0.00			
	7/14/2000		107.49		12.50		0.00			
	3/6/2001		108.24		11.77	120.01	0.00			
	6/6/2001		106.93		13.08		0.00			
	9/12/2001		104.79		15.22		0.00			
	12/13/2001		106.42		13.59		0.00			
	1/24/2002	MW-3 Destroyed								
MW-4	3/21/2002	NM	110.02	NM	7.90	117.92	NM	5.0-20.0	4.0-20.0	3.0-4.0
	6/14/2002	NM	107.27	NM	10.65		NM			
	9/10/2002	NM	104.81	NM	13.11		NM			
	12/11/2002	NM	104.01	NM	13.91		NM			
	3/25/2003	NM	109.16	NM	8.76		NM			
	6/27/2003	NM	108.22	NM	9.70		NM			
	10/1/2003	NM	105.17	NM	12.75		NM			
	12/12/2003	NM	105.36	NM	12.56		NM			
	3/26/2004	NM	109.72	NM	8.20		NM			
	7/9/2004	NM	106.54	NM	11.38		NM			
	9/21/2004	NM	104.81	NM	13.11		NM			
	12/20/04 & 12/21/04	105.52	105.47	12.40	12.45		NM			
	3/16/05 & 3/17/05	110.06	110.07	7.86	7.85		NM			
	6/9/05 & 6/13/05	110.08	110.01	7.84	7.91		NM			
	9/28/05 & 9/29/05	107.10	106.80	10.82	11.12		NM			
MW-5	3/21/2002	NM	109.42	NM	8.21	117.63	NM	5.0-20.0	4.0-20.0	3.0-4.0
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	9/10/2002	NM	103.99	NM	13.64		NM			
	12/11/2002	NM	103.21	NM	14.42		NM			
	3/25/2003	NM	108.53	NM	9.10		NM			
	6/27/2003	NM	107.40	NM	10.23		NM			
	10/1/2003	NM	104.40	NM	13.23		NM			
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	3/26/2004	NM	109.11	NM	8.52		NM			
	7/9/2004	NM	105.89	NM	11.74		NM			
	9/21/2004	NM	104.08	NM	13.55		NM			
	12/20/04 & 12/21/04	104.97	104.90	12.66	12.73		NM			
	3/16/05 & 3/17/05	109.59	109.58	8.04	8.05		NM			
	6/9/05 & 6/13/05	109.47	109.33	8.16	8.30		NM			
	9/28/05 & 9/29/05	106.13	106.05	11.50	11.58		NM			
MW-6	3/21/2002	NM	110.10	NM	7.46	117.56	NM	5.0-20.0	4.0-20.0	3.0-4.0
	6/14/2002	NM	107.52	NM	10.04		NM			
	9/10/2002	NM	105.12	NM	12.44		NM			
	12/11/2002	NM	104.33	NM	13.23		NM			
	3/25/2003	NM	109.29	NM	8.27		NM			
	6/27/2003	NM	108.45	NM	9.11		NM			
	10/1/2003	NM	105.50	NM	12.06		NM			
	12/12/2003	NM	105.67	NM	11.89		NM			
	3/26/2004	NM	109.87	NM	7.69		NM			
	7/9/2004	NM	106.90	NM	10.66		NM			
	9/21/2004	NM	105.13	NM	12.43		NM			
	12/20/04 & 12/21/04	105.72	105.65	11.84	11.91		NM			
	3/16/05 & 3/17/05	110.19	110.19	7.37	7.37		NM			
	6/9/05 & 6/13/05	NM	110.10	NM	7.46					
	9/28/05 & 9/29/05	107.16	106.96	10.40	10.60		NM			

Table 1. Water Level Data and Well Construction Details

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date	Groundwater Elevation (Mean Sea Level)		Depth-to-Water		Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval
		System On	System Off	System On	System Off		feet			
SP-1	6/1/2004	NM	NM	NM	11.58	NM	NM	14-17	13.5-19.5	0-13.5
SP-2	6/1/2004	NM	NM	NM	11.41	NM	NM	20-23	19-23	0-19.0
SP-3	6/1/2004	NM	NM	NM	11.07	NM	NM	19-22	18.5-24	0-18.5
SP-4	6/1/2004	NM	NM	NM	10.29	NM	NM	19-22	18.5-22	0-18.5
SP-5	6/1/2004	NM	NM	NM	10.87	NM	NM	14.5-17.5	14-19.5	0-14.0

Abbreviations:

NM = Not Measured

Notes: Monitoring wells were resurveyed on March 13, 2001, and it was discovered that the top-of-casing elevations for MW-2 and MW-3 had been entered in the reverse order when the table was created. This table reflects the corrected top-of-casing elevations, and corresponding groundwater elevations for MW-2 and MW-3.

Table 2. Groundwater Gradient and Flow Direction

Mani Site
200 Talmadge Drive, Santa Rosa, California

Date	Groundwater Gradient (ft/ft)	Flow Direction	Wells used for Calculating Gradient and Flow Direction
2/2/1995	0.02	South 13^0 West	MW-1, MW-2, MW-3
3/19/1998	0.02	South 5^0 East	MW-1, MW-2, MW-3
9/9/1999	0.01	South 52^0 West	MW-1, MW-2, MW-3
10/11/1999	0.01	South 50^0 West	MW-1, MW-2, MW-3
11/17/1999	0.01	South 51^0 West	MW-1, MW-2, MW-3
12/15/1999	0.01	South 47^0 West	MW-1, MW-2, MW-3
1/12/2000	0.01	South 54^0 West	MW-1, MW-2, MW-3
2/10/2000	0.01	South 49^0 West	MW-1, MW-2, MW-3
3/15/2000	0.01	South 57^0 West	MW-1, MW-2, MW-3
4/13/2000	0.01	South 55^0 West	MW-1, MW-2, MW-3
5/12/2000	0.01	South 52^0 West	MW-1, MW-2, MW-3
6/15/2000	0.01	South 52^0 West	MW-1, MW-2, MW-3
7/14/2000	0.01	South 51^0 West	MW-1, MW-2, MW-3
3/6/2001	0.01	South 55^0 West	MW-1, MW-2, MW-3
6/6/2001	0.01	South 55^0 West	MW-1, MW-2, MW-3
9/12/2001	0.01	South 56^0 West	MW-1, MW-2, MW-3
12/13/2001	0.01	South 47^0 West	MW-1, MW-2, MW-3
3/21/2002	0.01	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/14/2002	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/10/2002	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/11/2002	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/25/2003	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/27/2003	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
10/1/2003	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/12/2003	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/26/2004	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
7/9/2004	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/21/2004	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/21/2004	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/17/2005	0.008	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/13/2005	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/29/2005	0.008	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6

Note: Monitoring wells were resurveyed on March 13, 2001, and it was discovered that the top-of-casing elevations for MW-2 and MW-3 had been entered in the reverse order when the table was created. This table reflects the corrected top-of-casing elevations, and corresponding groundwater elevations for MW-2 and MW-3. Elevations are relative to mean sea level.

Table 3. Dissolved Oxygen and Indicator Parameters

Mani Site
200 Talmadge Drive, Santa Rosa, California

Well ID	Sample Date [a]	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Conductivity [b] (uS/cm)	Temperature (^{o}F)
MW-1	9/10/2002	---	---	6.74	502	70.9
	12/11/2002	---	---	6.85	819	65.7
	3/25/2003	0.28	---	7.00	1053	65.2
	6/27/2003	0.28	-108	6.83	839	64.4
	10/1/2003	0.28	-35	7.00	883	65.8
	12/12/2003	---	-54	6.81	1007	66.0
	3/26/2004	---	-64	6.76	1039	64.0
	7/9/2004	0.50	-68	6.70	921	65.1
	Biosparge System Start-up After 7/9/04 Monitoring Event					
	9/20/04 & 9/21/04*	0.33	-34	6.97	825	66.7
	12/20/04 & 12/21/04*	0.74	-54	6.91	891	66.9
	2/24/2005	---[c]	---	---	---	---
	3/16/05 & 3/17/05*	9.09	4	6.84	835	65.1
	6/9/05 & 6/13/05*	9.03	---	6.86 [e]	723 [e]	68.8 [e]
	9/28/05 & 9/29/05*	8.38	201	7.22	660	68.0
MW-2	9/10/2002	---	---	**Not Sampled**		
	12/11/2002	---	---	**Not Sampled**		
	3/25/2003	0.41	---	6.50	650	66.7
	6/27/2003	0.70	147	6.62	612	65.8
	10/1/2003	0.92	205	6.63	648	67.5
	12/12/2003	---	232	6.63	655	68.2
	3/26/2004	---	250	6.26	612	65.5
	7/9/2004	1.88	222	6.50	578	66.4
	Biosparge System Start-up After 7/9/04 Monitoring Event					
	9/20/04 & 9/21/04*	0.58	173	6.64	572	68.4
	12/20/04 & 12/21/04*	0.50	228	6.42	587	68.2
	2/24/2005	0.78	---	---	---	---
	3/16/05 & 3/17/05*	0.64	203	6.30	619	66.0
	6/9/05 & 6/13/05*	1.27	---	6.34 [e]	601 [e]	68.3 [e]
	9/28/05 & 9/29/05*	1.33	168	6.70	574	68.2
MW-3	**Well Destroyed**					
MW-4	9/10/2002	---	---	**Not Measured [d]**		
	12/11/2002	---	---	6.69	732	66.3
	3/25/2003	0.27	---	7.00	868	64.7
	6/27/2003	0.20	-94	6.60	820	66.4
	10/1/2003	0.29	-19	6.74	802	69.6
	12/12/2003	---	-533	6.75	826	67.8
	3/26/2004	---	2	6.55	886	64.0
	7/9/2004	3.31	-60	6.60	740	67.5
	Biosparge System Start-up After 7/9/04 Monitoring Event					
	9/20/04 & 9/21/04*	0.35	-39	7.03	633	71.8
	12/20/04 & 12/21/04*	0.69	-1	7.02	638	69.6
	2/24/2005	0.30	---	---	---	---
	3/16/05 & 3/17/05*	4.55	17	6.77	552	64.8
	6/9/05 & 6/13/05*	6.85	---	6.80 [e]	507 [e]	70.6 [e]
	9/28/05 & 9/29/05*	0.41	43	7.50	514	71.4

Table 3. Dissolved Oxygen and Indicator Parameters

Mani Site
200 Talmadge Drive, Santa Rosa, California

Well ID	Sample Date [a]	Dissolved Oxygen (mg/L)	ORP (mV)	pH	Conductivity [b] (uS/cm)	Temperature (^{o}F)
MW-5	9/10/2002	---	---	6.96	659	70.9
	12/11/2002	---	---	6.62	635	66.6
	3/25/2003	0.26	---	7.00	799	64.0
	6/27/2003	0.21	-43	6.57	774	65.3
	10/1/2003	0.30	19	6.67	732	67.8
	12/12/2003	---	31	6.67	735	67.3
	3/26/2004	---	41	6.54	803	62.8
	7/9/2004	0.45	7	6.50	726	65.5
	Biosparge System Start-up After 7/9/04 Monitoring Event					
	9/20/04 & 9/21/04*	0.27	27	6.65	653	68.5
	12/20/04 & 12/21/04*	0.59	45	6.61	639	66.7
	2/24/2005	0.27	---	---	---	---
	3/16/05 & 3/17/05*	0.60	530	6.56	598	63.1
	6/9/05 & 6/13/05*	0.35	---	6.77 [e]	603 [e]	67.5 [e]
	9/28/05 & 9/29/05*	0.40	16	6.80	530	68.9
MW-6	9/10/2002	---	---	6.88	612	69.9
	12/11/2002	---	---	6.44	563	68.2
	3/25/2003	0.28	---	7.00	653	65.5
	6/27/2003	0.39	178	6.61	610	66.9
	10/1/2003	0.58	208	6.69	646	69.4
	12/12/2003	---	263	6.68	661	69.3
	3/26/2004	---	222	6.44	605	64.4
	7/9/2004	0.54	225	6.51	580	67.5
	Biosparge System Start-up After 7/9/04 Monitoring Event					
	9/20/04 & 9/21/04*	0.56	176	6.57	572	70.2
	12/20/04 & 12/21/04*	3.10	212	6.52	558	69.3
	2/24/2005	3.74	---	---	---	---
	3/16/05 & 3/17/05*	4.70	179	6.43	560	65.3
	6/9/05 & 6/13/05*	5.44	---	6.64 [e]	590 [e]	68.9 [e]
	9/28/05 & 9/29/05*	5.79	175	6.90	525	70.9

Notes:

a = Tabulated indicator parameters were the last to be recorded from each well.
b = The conductivity was incorrectly reported for the 9/10/2002, 12/11/2002, and 3/25/2003 reporting periods. The decimal points have been moved to show the correct values.
c = DO was not measured because well was covered by a truck that could not be moved at the time DO was measured.
d = Well de-watered after purging 0.75 gallons. Indicator parameters were not measured.
e = A Hydac meter was used to measure indicator parameters due to the unavailability of the Ultrameter.
* = During this sampling event, DO was measured on the first date while the system was on and the other indicator parameters were measured on the second date during purging activities.

Abbreviations:

mg/L = milligrams per liter
ORP = oxidation/reduction potential
mV = millivolts
uS/cm = microSiemens per centimeter
^{o}F = degrees Fahrenheit
--- = Measurements not taken

Table 4. Analytical Results of Nutrient Compounds

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Sample Date	Analytic Method - EPA 300 (IC), SM 4500			
		Nitrate as Nitrogen (NO_3^{-1}-N)	Nitrite as Nitrogen (NO_2^{-1}-N)	Ammonia as Nitrogen (NH_4^{-1}-N)	Phosphate (PO_4)
		mg/L			
MW-1	5/8/2003	**0.99**	NA	NA	<2.0
	7/9/2004	<0.10	<0.10	<0.15	<0.50
	Biosparge System Start-up After 7/9/04 Monitoring Event				
	9/21/2004	<0.15	<0.15	**0.37**	<2.0
	First Nutrient Injection 9/22/04				
	11/9/2004	<0.50	NA	NA	NA
	12/21/2004	<0.10	<0.10	<0.2	<0.50
	3/17/2005	<0.15	<0.15	<0.15	<1.0
	6/13/2005	**1.4**	<0.15	<0.15	<1.0
	Second Nutrient Injection 7/21/05				
	8/12/2005*	**2.0**	0.0	NA	NA
	9/29/2005	<0.50	<0.5	<0.2	<0.50
MW-2	5/8/2003	**6.7**	NA	NA	<2.0
	7/9/2004	**1.4**	<0.10	<0.15	<0.50
	Biosparge System Start-up After 7/9/04 Monitoring Event				
	9/21/2004	**1.3**	<0.15	<0.15	<2.0
	First Nutrient Injection 9/22/04				
	11/9/2004	**5.9**	NA	NA	NA
	12/21/2004	**1.2**	<0.10	<0.2	<0.50
	3/17/2005	**2.0**	<0.15	<0.15	<1.0
	6/13/2005	**1.7**	<0.15	<0.15	<1.0
	Second Nutrient Injection 7/21/05				
	8/12/2005*	**0.5**	0.0	NA	NA
	9/29/2005	**0.84**	<0.50	<0.2	<0.50
MW-4	7/9/2004	<0.10	<0.10	<0.15	<0.50
	Biosparge System Start-up After 7/9/04 Monitoring Event				
	9/21/2004	**0.17**	<0.15	<0.15	<2.0
	First Nutrient Injection 9/22/04				
	11/9/2004	<0.50	NA	NA	NA
	12/21/2004	<0.10	<0.10	<0.2	<0.50
	3/17/2005	<0.15	<0.15	<0.15	<1.0
	6/13/2005	<0.15	<0.15	<0.15	<1.0
	Second Nutrient Injection 7/21/05				
	8/12/2005*	**2.0**	0.0	NA	NA
	9/29/2005	<0.50	<0.50	<0.2	<0.50
MW-5	7/9/2004	<0.10	<0.10	<0.15	<0.50
	Biosparge System Start-up After 7/9/04 Monitoring Event				
	9/21/2004	<0.15	<0.15	<0.15	<2.0
	First Nutrient Injection 9/22/04				
	11/9/2004	**3.0**	NA	NA	NA
	12/21/2004	<0.10	<0.10	<0.2	<0.50
	3/17/2005	<0.15	<0.15	<0.15	<1.0
	6/13/2005	**0.16**	<0.15	<0.15	<1.0
	Second Nutrient Injection 7/21/05				
	8/12/2005*	0.0	0.0	NA	NA
	9/29/2005	<0.50	<0.50	<0.2	<0.50

Table 4. Analytical Results of Nutrient Compounds

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Sample Date	Analytic Method - EPA 300 (IC), SM 4500			
		Nitrate as Nitrogen (NO_3^{-1}-N)	Nitrite as Nitrogen (NO_2^{-1}-N)	Ammonia as Nitrogen (NH_4^{-1}-N)	Phosphate (PO_4)
		mg/L			
MW-6	5/8/2003	**5.8**	NA	NA	<2.0
	7/9/2004	**1.4**	<0.10	<0.15	<0.50
	Biosparge System Start-up After 7/9/04 Monitoring Event				
	9/21/2004	**1.2**	<0.15	**0.30**	<2.0
	First Nutrient Injection 9/22/04				
	11/9/2004	**5.7**	NA	NA	NA
	12/21/2004	**1.2**	<0.10	<0.2	<0.50
	3/17/2005	**1.8**	<0.15	<0.15	<1.0
	6/13/2005	**1.6**	<0.15	<0.15	<1.0
	Second Nutrient Injection 7/21/05				
	8/12/2005*	**2.0**	0.0	NA	NA
	9/29/2005	**1.0**	<0.50	<0.2	<0.50

Abbreviations:

mg/L = milligrams per liter

NA = Not analyzed

* = Concentrations of Nitrate and Nitrite were analyzed using Nitrate/Nitrite test strips in the field.

Note: 9/21/04 data is considered baseline for pre-nutrient injection. The first nutrient injection was completed 9/22/04, after 3rd quarter sampling.

Table 5. Analytical Results of Groundwater Samples

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date Sampled	Analytic Methods	TPH-G	TPH-D	B	T	E	X	MTBE	DIPE	ETBE	TAME	TBA	EDC / EDB
			ug/L											
MW-1	2/2/95	8015M / 8020	**32,000**	**2600** [b]	**3,600**	**6,600**	**1,300**	**6,100**	NA	ND	ND	ND	ND	NA
	4/6/95	8015M / 8020	**10,000**	NA	**1,400**	**1,500**	**560**	**1,600**	NA	ND	ND	ND	ND	NA
	3/19/1998	5030/602/8260	**30,000**	**1,400**	**1,300**	**1,000**	**770**	**2,900**	**360**	ND	ND	ND	ND	NA
	9/9/1999	5030A/8260B/8015M	**19,000**	**1,600**	**570**	**220**	**360**	**1,100**	**140**	ND	ND	ND	ND	NA
	12/15/1999	5030A/8260B/8015M	**13,000**	**2,600**	**1,400**	**410**	**1,400**	**3,400**	**280**	ND	ND	ND	ND	NA
	3/15/2000	5030A/8260B/8015M	**23,000**	**1,600**	**920**	**360**	**970**	**2,600**	**120**	ND	ND	ND	ND	<50
	7/14/2000	5030A/8260B/8015M	**22,000**	**880**	**1,300**	**240**	**1,400**	**3,100**	**200**	ND	ND	ND	ND	<50
	3/6/2001	5030A/8260B/8015M	**25,000**	**2,900**	**1,700**	**310**	**2,200**	**4,400**	**260**	ND	ND	ND	ND	<0.50
	6/6/2001	5030A/8260B/8015M	**16,000**	**470** [c]	**980**	**140**	**1,300**	**1,800**	**200**	ND	ND	ND	ND	<50
	9/12/2001	5030A/8260B/8015M	**17,000**	**1,100** [c]	**730**	**96**	**980**	**1,800**	**240**	ND	ND	ND	**31**	<0.50
	12/13/2001	5030A/8260B/8015M	**29,000**	**4,100** [c]	**1,400**	**560**	**1,900**	**4,000**	**120**	ND	ND	ND	ND	<5.0
	3/21/2002	5030A/8260B/8015M	**6,400**	**1,700** [c]	**400**	**200**	**740**	**1,440**	**28**	<10	<10	<10	<10	<10
	6/14/2002	5030A/8260B/8015M	**12,000**	**2000** [a]	**370**	**150**	**860**	**1,700**	**45**	<10	<10	<10	<200	NA
	9/10/2002	5030A/8260B/8015M	**11,000**	**3800** [a]	**140**	**85**	**500**	**940**	**38**	<5.0	<5.0	<5.0	<100	NA
	12/11/2002	5030/8015M/8260B	**9,100**	**3200** [a]	**280**	**120**	**600**	**840**	**64**	<10	<10	<10	<250	NA
	3/25/2003	5030/8015M/8260B	**8,500**	NA	**160**	**210**	**860**	**1,780**	**33**	<10	<10	<10	<250	<10
	5/8/2003	5030/8015M/8260B	**9,900**	NA	**250**	**450**	**790**	**2,020**	<10	<10	<10	<10	<250	<10
	6/27/2003	5030/8015M/8260B	**5,800**	NA	**140**	**220**	**580**	**1,350**	**19**	<10	<10	<10	<25	<10
	10/1/2003	5030/8015M/8260B	**8,100**	NA	**180**	**330**	**1,100**	**2,700**	**36**	<10	<10	<10	<250	<10
	12/12/2003	5030/8015M/8260B	**23,000**	NA	**230**	**380**	**1,800**	**5,290**	**33**	<20	<20	<20	<500	<20
	3/26/2004 [f]	5030/8015M/8260B	**10,000**	**1,800** [a]	**92**	**140**	**900**	**2,200**	**20**	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	**4,900**	**1,600** [a]	**40**	**38**	**370**	**880**	**22**	<10	<10	<10	<250	NA
	Biosparge System Start-up After 7/9/04 Monitoring Event													
	9/21/2004	5030/8015M/8260B	**4,300**	**420** [a]	**16**	**13**	**150**	**281**	<10	<10	<10	<10	<250	NA
	12/21/2004	5030/8015M/8260B	**4,500**	**1,200** [a]	**11**	**11**	**37**	**167**	<10	<10	<10	<10	<250	NA
	3/17/2005	5030/8015M/8260B	**1,200**	**290** [a]	**1.3**	**1.6**	**25**	**66**	**1.4**	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	**470**	**130** [a]	**1.2**	<1.0	**22**	**32.3**	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	**280**	<50	<1.0	<1.0	**10**	**7.9**	<1.0	<1.0	<1.0	<1.0	<25	NA
MW-2	2/2/95 [a]	8015M / 8020	<50.0	**110** [e]	<0.5	**1.2**	<0.5	<0.5	NA	ND	ND	ND	ND	NA
	3/19/1995	5030/602/8260	<50.0	<50	<0.3	<0.3	<0.5	<0.5	NA	ND	ND	ND	ND	NA
	9/9/1999	5030A/8260B/8015M	<50.0	<50	<0.3	<0.3	<0.5	<0.5	ND	ND	ND	ND	ND	NA
	12/15/1999	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	NA
	3/15/2000	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.5
	7/14/2000	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.5
	3/6/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	6/6/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	9/12/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	12/13/2001	Not Sampled												
	3/21/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	Not Sampled												
	9/10/2002	Not Sampled												
	3/25/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	<50	NA	<1.0	**2.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 [f]	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	Biosparge System Start-up After 7/9/04 Monitoring Event													
	9/21/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	**2.1**	**4.1**	<1.0	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<25	NA
Water Quality Objectives in ug/L			<50	<50	<1	<42	<29	<17	<5	None	None	None	<12	<0.5

Table 5. Analytical Results of Groundwater Samples

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date Sampled	Analytic Methods	TPH-G	TPH-D	B	T	E	X	MTBE	DIPE	ETBE	TAME	TBA	EDC / EDB
			ug/L											
MW-3	2/2/95 [a]	8015M / 8020	<50.0	**460**	**5.4**	**12**	**1.3**	**12.0**	NA	NA	NA	NA	NA	NA
	3/19/1995	5030/602/8260	<50.0	<50	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA	NA
	9/9/1999	5030A/8260B/8015M	<50.0	<50	<0.3	<0.3	<0.5	<0.5	ND	ND	ND	ND	ND	NA
	12/15/1999	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	NA
	3/15/2000	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.5
	7/14/2000	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.5
	3/6/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	6/6/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	9/12/2001	5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND	ND	ND	ND	<0.50
	12/13/2001	Not Sampled												
	1/24/2002	Well Destroyed												
MW-4	3/21/2002	5030A/8260B/8015M	**420**	**120** [c]	**4.1**	<1.0	**5.4**	<1.0	**43**	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	5030A/8260B/8015M	**550**	**110** [a]	<1.0	<1.0	**3.4**	<1.0	**33**	<1.0	<1.0	<1.0	<25	NA
	9/10/2002	5030A/8260B/8015M	**1,300**	**200** [a]	**6.6**	<1.0	**38**	<1.0	**27**	<1.0	<1.0	<1.0	<25	NA
	12/11/2002	5030/8015M/8260B	**510**	**230** [a]	**2.1**	<1.0	**13**	<1.0	**28**	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	**410**	NA	<1.0	<1.0	**1.7**	<1.0	**24**	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	**410**	NA	<1.0	<1.0	**1.5**	<1.0	**9.8**	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	**350**	NA	<1.0	<1.0	<1.0	<1.0	**9.5**	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	**490**	NA	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 [f]	5030/8015M/8260B	**290**	<50	<1.0	<1.0	<1.0	<1.0	**9.0**	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	**870**	**120** [a]	**3.5**	<1.0	**2.3**	**10.3**	**6.4**	<1.0	<1.0	<1.0	<25	NA
		Biosparge System Start-up After 7/9/04 Monitoring Event												
	9/21/2004	5030/8015M/8260B	**650**	**91** [a]	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	**600**	**75** [a]	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	**130**	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	**180**	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
MW-5	3/21/2002	5030A/8260B/8015M	**400**	<50	<1.0	<1.0	<1.0	<1.0	**32**	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	**31**	<1.0	<1.0	<1.0	<25	NA
	9/10/2002	5030A/8260B/8015M	**350**	<50	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0	<1.0	<25	NA
	12/11/2002	5030/8015M/8260B	**390**	<50	<1.0	<1.0	<1.0	<1.0	**21**	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	**380**	NA	<1.0	<1.0	<1.0	<1.0	**21**	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	**290**	NA	<1.0	<1.0	<1.0	<1.0	**11**	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	**260**	NA	<1.0	<1.0	<1.0	<1.0	**5.9**	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	**210**	NA	<1.0	<1.0	<1.0	<1.0	**6.5**	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 [f]	5030/8015M/8260B	**270**	<50	<1.0	<1.0	<1.0	<1.0	**9.9**	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	**280**	<50	<1.0	<1.0	<1.0	<1.0	**7.1**	<1.0	<1.0	<1.0	<25	NA
		Biosparge System Start-up After 7/9/04 Monitoring Event												
	9/21/2004	5030/8015M/8260B	**230**	<50	<1.0	<1.0	<1.0	<1.0	**3.7**	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	**210**	<50	<1.0	<1.0	<1.0	<1.0	**3.4**	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	**200**	<50	<1.0	<1.0	<1.0	<1.0	**4.4**	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	**160**	<50	<1.0	<1.0	<1.0	<1.0	**2.0**	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	**200**	<50	<1.0	<1.0	<1.0	**1.5**	**1.4**	<1.0	<1.0	<1.0	<25	NA
MW-6	3/21/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/10/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/11/2002	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	**260**	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 [f]	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
		Biosparge System Start-up After 7/9/04 Monitoring Event												
	9/21/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
Water Quality Objectives in ug/L			<50	<50	<1	<42	<29	<17	<5	None	None	None	<12	<0.5

Table 5. Analytical Results of Groundwater Samples

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date Sampled	Analytic Methods	TPH-G	TPH-D	B	T	E	X	MTBE	DIPE	ETBE	TAME	TBA	EDC / EDB
			ug/L											
SP-1	6/1/2004	EPA 5030/8015M/8260B	<50	NA	<1.0 [g]	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
SP-2	6/1/2004	EPA 5030/8015M/8260B	<50	NA	<1.0 [g]	<1.0	<1.0	<1.0	**5.7**	<1.0	<1.0	<1.0	<25	<1.0
SP-3	6/1/2004	EPA 5030/8015M/8260B	**4,100**	NA	<5.0	<5.0	**11**	**240**	<5.0	<5.0	<5.0	<5.0	<100	<5.0
SP-4	6/1/2004	EPA 5030/8015M/8260B	**3,600**	NA	**15**	<5.0	**81**	**127**	**10**	<1.0	<1.0	<1.0	<25	<5.0
SP-5	6/1/2004	EPA 5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	**5.1**	<1.0	<1.0	<1.0	<25	<1.0
Trip Blank	3/19/1998	5030 / 602	<50	NA	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA	NA
	9/9/1999	5030A / 8020	<50	NA	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA	NA
	12/15/1999	8260B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2000	5030A / 8020	<50	NA	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA	NA
	7/14/2000	5030A / 8020	<50	NA	<0.3	<0.3	<0.5	<0.5	NA	NA	NA	NA	NA	NA
	3/6/2001	5030A / 8020	<50	NA	<0.30	<0.30	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	6/6/2001	5030A / 8020	<50	NA	<0.30	<0.30	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	9/12/2001	5030A / 8020	<50	NA	<0.30	<0.30	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	12/13/2001	5030A / 8020	<50	NA	<0.30	<0.30	<0.50	<0.50	NA	NA	NA	NA	NA	NA
	3/21/2002	8260	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	9/9/2002	8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	12/11/2002	5030/8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	<2.5	NA	NA	NA	NA	NA
	3/25/2003	5030/8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	6/27/2003	5030/8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	10/1/2003	5030/8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	12/12/2003	5030/8015M/8020	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
	3/26/2004	5030/8015M/8260B	<50	NA	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
Water Quality Objectives in ug/L			<50	<50	<1	<42	<29	<17	<5	None	None	None	<12	<0.5

Notes: [a] = Sampled by Sierra Environmental Service
[b] = Laboratory reports the positive result appears to be both a heavier and lighter hydrocarbon than diese
[c] = The Laboratory reports that results in the diesel range are primarily due to overlap from a gasoline range produc
[d] = The sample does not exhibit a chromatographic pattern characteristic of diesel. Higher boiling point components of weathered gasoline are preser
[e] = The laboratory reports the positive result appears to be a heavier hydrocarbon than diesel
[f] = 3/26/04 samples were analyzed for TPH-MO by 8015M. Results were ND<200 ug/L
[g] = Tetrahydrofuran (THF) was detected and is the primary ingredient in PVC pipe glue and consequently may not be a persistent contaminar

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline
TPH-D = Total petroleum hydrocarbons as diesel
B = Benzene
T = Toluene
E = Ethyl benzene
X = Total xylenes
EDC = 1,2-dichloroethane
EDB = 1,2-dibromoethane
NA = Not analyzed
ND = Not detected above laboratory detection limits

The 5 Oxygenates Include:

MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
TBA = Tert-butyl alcohol

Analytic Methods:

5030 = EPA Method GCFID/5030 for TPH-G
602 = EPA Method 602 for BTEX
8020 = EPA Method for MTBE
8260B = EPA Method 8260 for BTEX / Oxygenates
8015M = EPA method 8015M for Diesel

Table 6. Operation and Maintenance Data

Mani Site

200 Talmadge Drive, Santa Rosa, CA

Date	Sequencing Time Per Point	System Hour Meter Reading	Pressure Reading (psi)	S.C.F.M.
5/11/04 & 5/12/04	**Drilled and installed five biosparge points**			
5/26/04 & 5/27/04	**Developed five biosparge points**			
06/01/04	**Sampled biosparge points**			
06/09/04	**System start-up**			
06/16/04	**Tested program to run sparge points**			
8/24/2004	60 Min	938.2	20	2.0
9/20/2004	60 Min	1586.2	21	2.2
9/22/2004	**First Nutrient Injection**			
10/6/2004	60 Min	1921.2	21	2.2
10/15/2004	60 Min	2137.5	22	2.2
11/2/2004	60 Min	2570.9	20	2.2
11/15/2004	60 Min	2882.5	20	2.6
11/17/2004	60 Min	2925.5	20	2.5
11/24/2004	**Increased oxygen flow to each sparge point due to low DO levels.**			
	60 Min	NM	NM	3.3
1/12/2005	**Repaired SP-3 and SP-5 well base connections because they were loose. Replaced all sparge point caps.**			
	60 Min	4246.2	20	3.4
1/14/2005	60 Min	5041.9	20	3.0
1/20/2005	**Sealed SP-2 and SP-4 connections. Check back pressure at SP-3. Repaired SP-5 air hose leakage. Tighten tee on SP-1.**			
2/1/2005	60 Min	NM[a]	20	3.0
2/24/2005	**Measured DO concentrations to verify that DO concentrations were increasing as a result of flow increase and repairs.**			
3/1/2005	**Test back pressure vs. flow for each sparge point and increase air flow rate to increase DO concentrations in each sparge point.**			
	60 Min	5398.2	20	6.0
3/17/2005	60 Min	5762.7	20	6.0
3/22/2005	60 Min	5882.8	20	6.0
3/24/2005	**Adjusted compressor max and min settings from 42-60 psi to 52-70 psi. Replaced all air tubing for each sparge point to a more flexible tubing.**			
3/30/2005	60 Min	6073.2	20	5.0
9/29/2005		10199.2	10	6.0

Notes:

a = Misread System Hour Meter Reading
psi = Pounds per square inch
S.C.F.M = Standard Cubic Feet Per Minute
NM = Not measured
DO = Dissolved oxygen

Appendix A
Site-Specific Sampling Procedures

WINZLER & KELLY CONSULTING ENGINEERS

Site-Specific Groundwater Sampling Procedures
Mani Site
200 Talmadge Drive
Santa Rosa, California
September 28 and 29, 2005

1. Objective

Collect representative water level data and groundwater samples.

2. Background

Based on the analytical results of the previous sampling, field work proceeded from the monitoring wells in which the samples collected had the lowest concentrations of constituents to the wells that had the highest concentrations of constituents.

Water levels were measured to determine the direction and gradient of groundwater flow. Representative groundwater samples from the water-bearing zone were obtained using disposable polyethylene bailers following purging.

3. Personnel Required and Responsibilities

Winzler & Kelly Field Technicians: Pon Xayasaeng and Trevor White performed groundwater monitoring and sampling activities in accordance with the procedures outlined below.

4. Procedures

4a. Biosparge System Shutdown and DO Concentrations, September 28, 2005

- The membrane on the YSI Model 55 DO meter was checked for the presence of bubbles and wrinkles, neither of which was observed.
- The meter was calibrated in the field prior to collecting measurements.
- Using the calibrated YSI Model 55 DO Meter, DO concentrations were measured in each monitoring well.
- Following DO measurements, the biosparge system was shutdown to allow the groundwater to equilibrate.

4b. Decontamination Procedures, September 29, 2005

- Using alconox soap and potable water, all equipment and instruments to be used were decontaminated upon arriving at the site.
- All equipment and instruments were decontaminated after use in each well.
- All equipment and instruments were decontaminated after field activities had been completed.

- Nitrile gloves were worn by sampler at all times and changed after handling equipment and instruments.

4c. Calibration Procedures, September 29, 2005

- The Ultrameter was calibrated for conductivity and pH. Temperature calibration is not necessary in the Ultrameter.
- Conductivity was calibrated using KCl-7000 standard solution within its expiration date.
- The calibration for pH included "zeroing" the Ultrameter with a pH 7 buffer solution followed by adjusting the gain with acid and base buffers (4.01 and 10.00). All buffer solutions were within their expiration date.

4d. Groundwater Elevations, September 28 and 29, 2005

- A water level meter was used to determine the depth-to-groundwater (DTW) in each monitoring well after allowing each well to equilibrate to atmospheric pressure for at least 30 minutes.
- DTW was measured while the biosparge system was turned on and while the system was turned off.
- Recorded depth, time and visual observations regarding well access, condition, security, etc on water level data sheet.
- The water level meter was decontaminated after each use.

4e. Purging, September 29, 2005

- The volume of standing water in each monitoring well was calculated using the diameter of the well, the measured depth-to-water and the depth-to-bottom. The volume was recorded on the Well Sampling Data Sheet for each well.
- Monitoring wells were purged using a 12-volt DC 1.5-inch electric submersible pump.
- Field parameters (pH, conductivity, temperature) were obtained with the Ultrameter and visual observations of color/odor/turbidity at each well casing interval throughout the purging process.
- The time, readings, and visual comments were recorded on the Well Sampling Data Sheet.
- Each well was purged until field parameters stabilized, not exceeding 7 casing volumes, or until the well de-watered.
- The electric submersible pump was decontaminated after each use.
- All excess water was transferred to 55-gallon drums labeled and secured on site.

4f. Groundwater Sample Collection, September 29, 2005

- Groundwater samples were collected by lowering previously unused, disposable, polyethylene, bottom-filling bailers into the well once the water level had recharge to at least 80%.
- When completely full, the bailer was carefully retracted from the well and the groundwater was transferred from the bailers to the appropriate certified clean sampling containers.

- Groundwater transferred into 40-ml glass vials were preserved with HCl.
- Upon filling, each vial was immediately capped. The vial was checked for air bubbles by inverting and gently tapping the vial.
- All sample containers were labeled with the following information:

  Sample ID Date and Time Sample Collected
  Location Sampler's Initials
  Project Number
- Sample information was documented on a chain-of-custody form.
- All sample containers were placed in an ice chest chilled with ice.
- Upon completion of the sampling activities, each well was closed and secured by replacing the well cap and securing the lock.

5. Equipment Used:

- Disposable gloves
- Potable water
- Alconox soap
- Containers to hold rinsate water
- Scrub Brushes
- Tools to open wells
- Keys to wells
- Water Level Data Form/pencil
- Well Sampling Data Sheet
- Groundwater Sampling Log form
- Water level meter
- 12-volt DC 1.5-inch electric submersible pump
- Ultrameter
- Containers to hold extracted water (as required)
- Disposable bailers (previously unused)
- Monofilament nylon line (50 lb test)
- Scissors
- Laboratory supplied sample containers (preserved, as required)
- Sample labels
- Ice chest
- Ice
- Labels/indelible marker
- Trash bags
- 55-gallon drums
- Ziploc bags
- Portable 12-V battery

Appendix B
Well Sampling Data Sheets

WINZLER & KELLY
CONSULTING ENGINEERS

WELL SAMPLING DATA SHEET

PROJECT NAME: Mani
PROJECT NUMBER: 023430500I.32002
WELL DESIGNATION: MW-1

PROJECT DATE: 9/29/05
SAMPLER: Pon Xayasaeng
SAMPLE NUMBER: MW-1

CONDITION OF WELL HEAD/VAULT/CAP & LOCK:
A. TOP OF CASING ELEVATION:
B. DEPTH TO GROUNDWATER (initial): 11.25'
C. DEPTH OF WELL: 25' MEASURED _____
D. HEIGHT OF WATER COLUMN (C-B):
E. GROUNDWATER ELEVATION (A-B):

CASING DIAMETER: 2" X 3" _____ 4" _____ OTHER _____

CALCULATED WELL VOLUME: D X V = (25 - 11.25)(0.163) = 2.3 gal
Volume (V) of 2" well - 0.163 gal/ft
Volume (V) of 4" well - 0.653 gal/ft

ODOR No SHEEN No FLOATING PRODUCT THICKNESS No

PUMP TYPE: POLY BAILER _____ STAINLESS BAILER _____
ELECTRIC X OTHER _____

PUMP DEPTH:

TIME	GALLONS PURGED	NO. OF WELL VOLUMES	pH	TEMPERATURE (°F OR °C)	CONDUCTIVITY (mmhos/cm or µmhos/cm)	TURBIDITY (NTU or visual)	ORP (mV)
		2.3	1	7.6 / 21.4	669.6	clear	210
		4.6	2	7.6 / 20.6	669.9	clear	210
		6.9	3	7.22 / 20.0	659.9	clear	208

RECHARGE RATE (qualitative):

SAMPLER TYPE: TEFLON BAILER _____ ACRYLIC BAILER _____ DISPOSABLE BAILER _____

SAMPLES COLLECTED: PRESERVED VOA'S _____ UNPRESERVED VOA'S _____
PRESERVED LITERS _____ UNPRESERVED LITERS _____
500 ml PLASTIC BOTTLE WITH PRESERVATIVE FOR METALS:
FILTERED _____ UNFILTERED _____
OTHER _____

COMMENTS: _____

WINZLER & KELLY
CONSULTING ENGINEERS

WELL SAMPLING DATA SHEET

PROJECT NAME: Mare
PROJECT NUMBER: 023430500I.32002
WELL DESIGNATION: MW-2

PROJECT DATE: 9/29/05
SAMPLER: Pon Xayasaeng
SAMPLE NUMBER: MW-2

CONDITION OF WELL HEAD/VAULT/CAP & LOCK:
A. TOP OF CASING ELEVATION:
B. DEPTH TO GROUNDWATER (initial): 12.46'
C. DEPTH OF WELL: 25' MEASURED _____
D. HEIGHT OF WATER COLUMN (C-B):
E. GROUNDWATER ELEVATION (A-B):

CASING DIAMETER: 2" X 3" _____ 4" _____ OTHER _____

CALCULATED WELL VOLUME: D X V = (25 - 12.46)(0.163) = 2.0 gal
Volume (V) of 2" well - 0.163 gal/ft
Volume (V) of 4" well - 0.653 gal/ft

ODOR No SHEEN No FLOATING PRODUCT THICKNESS ND

PUMP TYPE: POLY BAILER _____ STAINLESS BAILER _____
ELECTRIC X OTHER _____

PUMP DEPTH:

TIME	GALLONS PURGED	NO. OF WELL VOLUMES	pH	TEMPERATURE (°F OR °C)	CONDUCTIVITY (mmhos/cm or µmhos/cm)	TURBIDITY (NTU or visual)	ORP (mV)
	2	1	6.57	20.3	570.0	clear	164
	4	2	6.70	20.1	572.9	clear	172
	6	3	6.70	20.1	573.7	clear	168

RECHARGE RATE (qualitative):

SAMPLER TYPE: TEFLON BAILER _____ ACRYLIC BAILER _____ DISPOSABLE BAILER _____

SAMPLES COLLECTED: PRESERVED VOA'S _____ UNPRESERVED VOA'S _____
PRESERVED LITERS _____ UNPRESERVED LITERS _____
500 ml PLASTIC BOTTLE WITH PRESERVATIVE FOR METALS:
FILTERED _____ UNFILTERED _____
OTHER _____

COMMENTS: _____

WINZLER & KELLY
CONSULTING ENGINEERS

WELL SAMPLING DATA SHEET

PROJECT NAME: Mari
PROJECT NUMBER: 023430500I.32002
WELL DESIGNATION: MW-4

PROJECT DATE: 9/28/05
SAMPLER: Pon Xayasaeng
SAMPLE NUMBER: MW-4

CONDITION OF WELL HEAD/VAULT/CAP & LOCK:
A. TOP OF CASING ELEVATION:
B. DEPTH TO GROUNDWATER (initial): 11.12'
C. DEPTH OF WELL: 20' MEASURED _____
D. HEIGHT OF WATER COLUMN (C-B):
E. GROUNDWATER ELEVATION (A-B):

CASING DIAMETER: 2" X 3" _____ 4" _____ OTHER _____

CALCULATED WELL VOLUME: D X V = (20 - 11.12)(0.163) = 1.5 gal
Volume (V) of 2" well - 0.163 gal/ft
Volume (V) of 4" well - 0.653 gal/ft

ODOR No SHEEN No FLOATING PRODUCT THICKNESS No

PUMP TYPE: POLY BAILER _____ STAINLESS BAILER _____
ELECTRIC X OTHER _____

PUMP DEPTH:

TIME	GALLONS PURGED	NO. OF WELL VOLUMES	pH	TEMPERATURE (°F OR °C)	CONDUCTIVITY (mmhos/cm or µmhos/cm)	TURBIDITY (NTU or visual)	ORP (mV)
	1.5	1	7.5	21.9	513.6	Clear	45
	3.0	2	—	Dewatered @ 2.1 gallons			
	4.5	3					

RECHARGE RATE (qualitative):

SAMPLER TYPE: TEFLON BAILER _____ ACRYLIC BAILER _____ DISPOSABLE BAILER _____

SAMPLES COLLECTED: PRESERVED VOA'S _____ UNPRESERVED VOA'S _____
PRESERVED LITERS _____ UNPRESERVED LITERS _____
500 ml PLASTIC BOTTLE WITH PRESERVATIVE FOR METALS:
FILTERED _____ UNFILTERED _____
OTHER _____

COMMENTS: _____

WINZLER & KELLY
CONSULTING ENGINEERS

WELL SAMPLING DATA SHEET

PROJECT NAME: Mari
PROJECT NUMBER: 023430500I.32002
WELL DESIGNATION: MW-5

PROJECT DATE: 9/29/05
SAMPLER: Pon Xayasaeng
SAMPLE NUMBER: MW-5

CONDITION OF WELL HEAD/VAULT/CAP & LOCK:
A. TOP OF CASING ELEVATION:
B. DEPTH TO GROUNDWATER (initial): 11.58'
C. DEPTH OF WELL: 20' MEASURED _____
D. HEIGHT OF WATER COLUMN (C-B):
E. GROUNDWATER ELEVATION (A-B):

CASING DIAMETER: 2" X 3" _____ 4" _____ OTHER _____

CALCULATED WELL VOLUME: D X V = (20 - 11.58)(0.163) = 1.4 gal
Volume (V) of 2" well - 0.163 gal/ft
Volume (V) of 4" well - 0.653 gal/ft

ODOR NO SHEEN NO FLOATING PRODUCT THICKNESS NO

PUMP TYPE: POLY BAILER _____ STAINLESS BAILER _____
ELECTRIC X OTHER _____

PUMP DEPTH:

TIME	GALLONS PURGED	NO. OF WELL VOLUMES	pH	TEMPERATURE (°F OR °C)	CONDUCTIVITY (mmhos/cm or µmhos/cm)	TURBIDITY (NTU or visual)	ORP (mv)
	1.4	1	7.5	21.3	513.0	clear	67
	2.8	2	6.91	20.8	535.0	clear	30
	4.2	3	6.80	20.5	530.0	clear	16

RECHARGE RATE (qualitative):

SAMPLER TYPE: TEFLON BAILER _____ ACRYLIC BAILER _____ DISPOSABLE BAILER _____

SAMPLES COLLECTED: PRESERVED VOA'S _____ UNPRESERVED VOA'S _____
PRESERVED LITERS _____ UNPRESERVED LITERS _____
500 ml PLASTIC BOTTLE WITH PRESERVATIVE FOR METALS:
FILTERED _____ UNFILTERED _____
OTHER _____

COMMENTS: _____

WINZLER & KELLY
CONSULTING ENGINEERS

WELL SAMPLING DATA SHEET

PROJECT NAME: Mani
PROJECT NUMBER: 023430500I.32002
WELL DESIGNATION: MW-6

PROJECT DATE: 9/29/05
SAMPLER: Pon Xayasaeng
SAMPLE NUMBER: MW-6

CONDITION OF WELL HEAD/VAULT/CAP & LOCK:
A. TOP OF CASING ELEVATION:
B. DEPTH TO GROUNDWATER (initial): 10.60'
C. DEPTH OF WELL: 20' MEASURED _____
D. HEIGHT OF WATER COLUMN (C-B):
E. GROUNDWATER ELEVATION (A-B):

CASING DIAMETER: 2" X 3" _____ 4" _____ OTHER _____

CALCULATED WELL VOLUME: D X V = (20 - 10.60)(0.163) = 1.5 gal
Volume (V) of 2" well - 0.163 gal/ft
Volume (V) of 4" well - 0.653 gal/ft

ODOR NO SHEEN NO FLOATING PRODUCT THICKNESS NO

PUMP TYPE: POLY BAILER _____ STAINLESS BAILER _____
ELECTRIC X OTHER _____

PUMP DEPTH:

TIME	GALLONS PURGED	NO. OF WELL VOLUMES	pH	TEMPERATURE (°F OR °C)	CONDUCTIVITY (mmhos/cm or µmhos/cm)	TURBIDITY (NTU or visual)	ORP (mV)
	1.5	1	7.1	21.7	5055	Clear	204
	3.0	2	7.0	21.9	520.0	clear	177
	4.5	3	6.9	21.6	525.0	Clear	175

RECHARGE RATE (qualitative):

SAMPLER TYPE: TEFLON BAILER _____ ACRYLIC BAILER _____ DISPOSABLE BAILER _____

SAMPLES COLLECTED: PRESERVED VOA'S _____ UNPRESERVED VOA'S _____
PRESERVED LITERS _____ UNPRESERVED LITERS _____
500 ml PLASTIC BOTTLE WITH PRESERVATIVE FOR METALS:
FILTERED _____ UNFILTERED _____
OTHER _____

COMMENTS: _____

Appendix C
Analytical Laboratory Report

Analytical Sciences

Report Date: October 17, 2005

Laboratory Report

Pon Xayasaeng
Winzler & Kelly Consulting Engineers
495 Tesconi Circle, Suite 9
Santa Rosa CA, 95401

Project Name: **Mani** **0234305001.32002**

Lab Project: **5093013**

This 19 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director

P.O. Box 750336
Petaluma, CA 94975-0336
Telephone: (707) 769-3128

110 Liberty Street
Petaluma, CA 94952

TPH Gasoline in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-01	**MW-2**	Gasoline	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/04/05	QC Batch:	B000174
Date Received:	09/30/05	Method:	EPA 8015		

TPH Gasoline in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-02	**MW-6**	Gasoline	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000174
Date Received:	09/30/05	Method:	EPA 8015		

TPH Gasoline in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-03	**MW-4**	Gasoline	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000174
Date Received:	09/30/05	Method:	EPA 8015		

TPH Gasoline in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-04	**MW-5**	Gasoline	200	50

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000174
Date Received:	09/30/05	Method:	EPA 8015		

TPH Gasoline in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-05	**MW-1**	Gasoline	280	50

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch: B000174
Date Received:	09/30/05	Method:	EPA 8015	

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-01	**MW-2**	Benzene	ND	1.0
		Toluene	ND	1.0
		Ethylbenzene	ND	1.0
		m,p-Xylene	1.2	1.0
		o-Xylene	ND	1.0
		Tertiary Butyl Alcohol (TBA)	ND	25
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane	19.2	96	70-130
Toluene-d8	20.5	102	70-130
4-Bromofluorobenzene	18.9	94	70-130

Date Sampled:	09/29/05	Date Analyzed:	10/03/05	QC Batch: B000166
Date Received:	09/30/05	Method:	EPA 8260B	

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-02	**MW-6**	Benzene	ND	1.0
		Toluene	ND	1.0
		Ethylbenzene	ND	1.0
		m,p-Xylene	ND	1.0
		o-Xylene	ND	1.0
		Tertiary Butyl Alcohol (TBA)	ND	25
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane	19.8	99	70-130
Toluene-d8	20.8	104	70-130
4-Bromofluorobenzene	19.2	96	70-130

Date Sampled:	09/29/05	Date Analyzed:	10/04/05	QC Batch: B000166
Date Received:	09/30/05	Method:	EPA 8260B	

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-03	**MW-4**	Benzene	ND	1.0
		Toluene	ND	1.0
		Ethylbenzene	ND	1.0
		m,p-Xylene	ND	1.0
		o-Xylene	ND	1.0
		Tertiary Butyl Alcohol (TBA)	ND	25
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane	20.2	101	70-130
Toluene-d8	20.6	103	70-130
4-Bromofluorobenzene	18.6	93	70-130

Date Sampled:	09/29/05	Date Analyzed:	10/04/05	QC Batch: B000166
Date Received:	09/30/05	Method:	EPA 8260B	

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-04	**MW-5**	Benzene	ND	1.0
		Toluene	ND	1.0
		Ethylbenzene	ND	1.0
		m,p-Xylene	1.5	1.0
		o-Xylene	ND	1.0
		Tertiary Butyl Alcohol (TBA)	ND	25
		Methyl tert-Butyl Ether (MTBE)	1.4	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane	20.1	100	70-130
Toluene-d8	20.5	102	70-130
4-Bromofluorobenzene	19.1	96	70-130

Date Sampled:	09/29/05	Date Analyzed:	10/04/05	QC Batch: B000166
Date Received:	09/30/05	Method:	EPA 8260B	

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-05	**MW-1**	Benzene	ND	1.0
		Toluene	ND	1.0
		Ethylbenzene	10	1.0
		m,p-Xylene	7.9	1.0
		o-Xylene	ND	1.0
		Tertiary Butyl Alcohol (TBA)	ND	25
		Methyl tert-Butyl Ether (MTBE)	ND	1.0
		Di-isopropyl Ether (DIPE)	ND	1.0
		Ethyl tert-Butyl Ether (ETBE)	ND	1.0
		Tert-Amyl Methyl Ether (TAME)	ND	1.0

Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)
Dibromofluoromethane	20.1	100	70-130
Toluene-d8	20.6	103	70-130
4-Bromofluorobenzene	19.3	96	70-130

Date Sampled:	09/29/05	Date Analyzed:	10/04/05	QC Batch: B000166
Date Received:	09/30/05	Method:	EPA 8260B	

TPH Diesel in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-01	**MW-2**	Diesel	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/07/05	QC Batch:	B000175
Date Received:	09/30/05	Method:	EPA 8015M		

TPH Diesel in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-02	**MW-6**	Diesel	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/07/05	QC Batch:	B000175
Date Received:	09/30/05	Method:	EPA 8015M		

TPH Diesel in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-03	**MW-4**	Diesel	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/07/05	QC Batch:	B000175
Date Received:	09/30/05	Method:	EPA 8015M		

TPH Diesel in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-04	**MW-5**	Diesel	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/07/05	QC Batch:	B000175
Date Received:	09/30/05	Method:	EPA 8015M		

TPH Diesel in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5093013-05	**MW-1**	Diesel	ND	50

Date Sampled:	09/29/05	Date Analyzed:	10/07/05	QC Batch:	B000175
Date Received:	09/30/05	Method:	EPA 8015M		

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-01	**MW-2**	Nitrate as N	0.84	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-02	**MW-6**	Nitrate as N	1.0	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-03	**MW-4**	Nitrate as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-04	**MW-5**	Nitrate as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-05	**MW-1**	Nitrate as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-01	**MW-2**	Nitrite as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-02	**MW-6**	Nitrite as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-03	**MW-4**	Nitrite as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-04	**MW-5**	Nitrite as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-05	**MW-1**	Nitrite as N	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-01	**MW-2**	Ammonia as N	ND	0.2

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000183
Date Received:	09/30/05	Method:	EPA 350.3		

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-02	**MW-6**	Ammonia as N	ND	0.2

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000183
Date Received:	09/30/05	Method:	EPA 350.3		

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-03	**MW-4**	Ammonia as N	ND	0.2

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000183
Date Received:	09/30/05	Method:	EPA 350.3		

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-04	**MW-5**	Ammonia as N	ND	0.2

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000183
Date Received:	09/30/05	Method:	EPA 350.3		

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-05	**MW-1**	Ammonia as N	ND	0.2

Date Sampled:	09/29/05	Date Analyzed:	10/05/05	QC Batch:	B000183
Date Received:	09/30/05	Method:	EPA 350.3		

Phosphate in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-01	**MW-2**	Phosphate	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Phosphate in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-02	**MW-6**	Phosphate	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Phosphate in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-03	**MW-4**	Phosphate	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Phosphate in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-04	**MW-5**	Phosphate	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Phosphate in Water

Lab#	Sample ID	Compound Name	Result (mg/L)	RDL (mg/L)
5093013-05	**MW-1**	Phosphate	ND	0.50

Date Sampled:	09/29/05	Date Analyzed:	09/30/05	QC Batch:	B000159
Date Received:	09/30/05	Method:	EPA 300.0		

Quality Assurance Report

TPH Gasoline in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000174 - EPA 5030 GC										
Blank (B000174-BLK1)				Prepared & Analyzed: 10/04/05						
Gasoline	ND	50	ug/L							
Matrix Spike (B000174-MS1)		**Source: 5093009-01**		Prepared & Analyzed: 10/04/05						
Benzene	9.73	0.50	ug/L	10.0	ND	97	70-130			
Toluene	9.73	0.50	ug/L	10.0	ND	97	70-130			
Ethylbenzene	9.72	0.50	ug/L	10.0	ND	97	70-130			
Xylenes	29.2	1.5	ug/L	30.0	ND	97	70-130			
Matrix Spike Dup (B000174-MSD1)		**Source: 5093009-01**		Prepared & Analyzed: 10/04/05						
Benzene	9.56	0.50	ug/L	10.0	ND	96	70-130	1	20	
Toluene	9.70	0.50	ug/L	10.0	ND	97	70-130	0	20	
Ethylbenzene	9.68	0.50	ug/L	10.0	ND	97	70-130	0	20	
Xylenes	29.1	1.5	ug/L	30.0	ND	97	70-130	0	20	

Volatile Hydrocarbons by GC/MS in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000166 - EPA 5030 GC/MS										
Blank (B000166-BLK1)				Prepared & Analyzed: 10/03/05						
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	ug/L							
Ethylbenzene	ND	1.0	ug/L							
m,p-Xylene	ND	1.0	ug/L							
o-Xylene	ND	1.0	ug/L							
Tertiary Butyl Alcohol (TBA)	ND	25	ug/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	ug/L							
Di-isopropyl Ether (DIPE)	ND	1.0	ug/L							
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	ug/L							
Tert-Amyl Methyl Ether (TAME)	ND	1.0	ug/L							
Surrogate: Dibromofluoromethane	*17.6*		*ug/L*	*20.0*		*88*	*70-130*			
Surrogate: Toluene-d8	*20.8*		*ug/L*	*20.0*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*20.9*		*ug/L*	*20.0*		*104*	*70-130*			
Matrix Spike (B000166-MS1)		**Source: 5093013-01**		Prepared & Analyzed: 10/03/05						
1,1-Dichloroethene (1,1-DCE)	21.7	1.0	ug/L	25.0	ND	87	70-130			
Benzene	22.6	1.0	ug/L	25.0	ND	90	70-130			
Trichloroethene (TCE)	21.8	1.0	ug/L	25.0	ND	87	70-130			
Toluene	23.6	1.0	ug/L	25.0	ND	94	70-130			
Chlorobenzene	22.6	1.0	ug/L	25.0	ND	90	70-130			
Surrogate: Dibromofluoromethane	*18.7*		*ug/L*	*20.0*		*94*	*70-130*			
Surrogate: Toluene-d8	*20.9*		*ug/L*	*20.0*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*19.2*		*ug/L*	*20.0*		*96*	*70-130*			
Matrix Spike Dup (B000166-MSD1)		**Source: 5093013-01**		Prepared & Analyzed: 10/03/05						
1,1-Dichloroethene (1,1-DCE)	22.1	1.0	ug/L	25.0	ND	88	70-130	1	20	
Benzene	22.8	1.0	ug/L	25.0	ND	91	70-130	1	20	
Trichloroethene (TCE)	21.9	1.0	ug/L	25.0	ND	88	70-130	1	20	
Toluene	23.2	1.0	ug/L	25.0	ND	93	70-130	1	20	
Chlorobenzene	23.4	1.0	ug/L	25.0	ND	94	70-130	4	20	
Surrogate: Dibromofluoromethane	*18.6*		*ug/L*	*20.0*		*93*	*70-130*			
Surrogate: Toluene-d8	*20.4*		*ug/L*	*20.0*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*19.0*		*ug/L*	*20.0*		*95*	*70-130*			

TPH Diesel in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000175 - EPA 3510C										
Blank (B000175-BLK1)				Prepared: 10/04/05 Analyzed: 10/07/05						
Diesel	ND	50	ug/L							
LCS (B000175-BS1)				Prepared: 10/04/05 Analyzed: 10/07/05						
Diesel	2300	50	ug/L	2740		84	65-135			
LCS Dup (B000175-BSD1)				Prepared: 10/04/05 Analyzed: 10/07/05						
Diesel	2270	50	ug/L	2740		83	65-135	1	20	

Nitrate as Nitrogen in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000159 - NO PREP										
Blank (B000159-BLK1)				Prepared & Analyzed: 10/07/05						
Nitrate as N	ND	0.10	mg/L							
LCS (B000159-BS1)				Prepared & Analyzed: 10/07/05						
Nitrate as N	0.458	0.10	mg/L	0.452		101	85-115			
LCS Dup (B000159-BSD1)				Prepared & Analyzed: 10/07/05						
Nitrate as N	0.465	0.10	mg/L	0.452		103	85-115	2	20	

Nitrite as Nitrogen in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000159 - NO PREP										
Blank (B000159-BLK1)				Prepared & Analyzed: 10/07/05						
Nitrite as N	ND	0.10	mg/L							
LCS (B000159-BS1)				Prepared & Analyzed: 10/07/05						
Nitrite as N	0.167	0.10	mg/L	0.152		110	85-115			
LCS Dup (B000159-BSD1)				Prepared & Analyzed: 10/07/05						
Nitrite as N	0.167	0.10	mg/L	0.152		110	85-115	0	20	

Phosphate in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B000159 - NO PREP										
Blank (B000159-BLK1)				Prepared & Analyzed: 10/07/05						
Phosphate	ND	0.20	mg/L							

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference

Analytical Sciences
P.O. Box 750336, Petaluma, CA 94975-0336
110 Liberty Street, Petaluma, CA 94952
(707) 769-3128
Fax (707) 769-8093

CHAIN OF CUSTODY

LAB PROJECT NUMBER: 5093013
WINZLER & KELLY PROJECT NAME: Mani
WINZLER & KELLY PROJECT NUMBER: 023430500I.3200Z

CLIENT INFORMATION

COMPANY NAME: WINZLER & KELLY CONSULTING ENGINEERS
ADDRESS: 495 TESCONI CIRCLE, SUITE 9
SANTA ROSA, CA 95401-4696
CONTACT: Results: Sonya; Questions: Ron
PHONE#: (707) 523-1010
FAX #: (707) 527-8679

TURNAROUND TIME (check one)

MOBILE LAB ____
SAME DAY ____ 24 HOURS ____
48 HOURS ____ 72 HOURS ____
5 DAYS ____ NORMAL X

GEOTRACKER EDF: X Y ___ N
GLOBAL ID: T0609700725

COOLER TEMPERATURE
Blue Ice °C

COC
PAGE 1 OF 1

ANALYSIS

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	TPH/GAS/BTEX EPA 8015M/8260B	TPH DIESEL / EPA 8015M	VOLATILE HYDROCARBONS EPA 8260B (FULL LIST)	BTEX & OXYGENATES EPA 8260B	OXYGENATED FUEL ADDITIVES EPA 8260M	CHLORINATED SOLVENTS EPA 8010 / EPA 8260B	SEMI-VOLATILE HYDROCARBONS EPA 8270	TRPH / TOG SM 5520F / EPA 418.1M	PESTICIDES / PCB'S EPA 8081 / 8141 / 8082	Ammonia Nitrogen	Total phosphate	Nitrate	Nitrite	COMMENTS	LAB SAMPLE #
1	MW-2	9/29/05	12:07	W	7	Y/N	X	X		X						X	X	X	X	5093013	-01
2	MW-6		12:24		7															5093013	-02
3	MW-4		12:44		7															5093013	-03
4	MW-5		13:05		7															5093013	-04
5	MW-1		13:19		7															5093013	-05
6																					
7																					
8																					
9																					
10																					
11																					

SIGNATURES

SAMPLED BY: Ron Yayasaeng

RELINQUISHED BY: R. Yayasaeng
SIGNATURE
9/29/05 DATE
13:56 TIME

RECEIVED BY LABORATORY:
SIGNATURE
9/30/05 DATE
2:20 PM TIME

Appendix D
GeoTracker Upload Verification

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title:	**Well Measurement File, 3rd Qtr 2005, Mani Site**
Submittal Date/Time:	**10/24/2005 3:49:34 PM**
Confirmation Number:	**7772979557**

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Logged in as WINZLER (AUTH_RP) CONTACT SITE ADMINISTRATOR.